

N69118.AR.001659  
ST JULIENS CREEK  
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U S NAVY RESPONSE TO THE U S EPA REGION III COMMENTS ON THE DRAFT RECORD  
OF DECISION SITE 5 BURNING GROUNDS AND BLOWS CREEK USEPA DESIGNATION  
OPERABLE UNIT 5 (OU 5) ST JULIENS CREEK ANNEX VA  
03/23/2016  
CH2M HILL

**Responses to Comments**  
**Draft ROD**  
**Site 5 –Burning Grounds (EPA Designation OU-5) and Blows Creek**  
**St. Juliens Creek Annex**  
**Chesapeake, Virginia**

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**DATE:** March 23, 2016

**Comments from EPA, provided March 17, 2016.**

1. **Comment:** *Section 2.7.2 provides a summary of the ecological risk assessment at Site 5. Based on the information that is provided, it appears that groundwater was not evaluated for potential ecological risk at Site 5 should it discharge to surface water. Given the shallow groundwater and the proximity, and thus likely discharge, to Blows Creek, this is likely a complete exposure pathway and thus represents a data gap. The NFA for groundwater was based on five metals that exceeded human health criteria and it is not clear if there are other contaminants that exceed ecological criteria. The Record of Decision should address this migration and exposure pathway to ecological receptors.*

**Response:** The Blows Creek BERA (CH2M HILL, 2006; AR number 000562) evaluated the potential ecological risk at Site 5 (and all sites within the Blows Creek watershed) should groundwater discharge to surface water. The BERA concluded that groundwater discharge to surface water in Blows Creek does not pose an unacceptable risk. The first sentence in Section 2.7.2 (Ecological Risk Summary) has been revised to state the following, "A BERA was completed in order to identify potential unacceptable ecological risks for ecological receptors exposed to surface soil, surface water, and sediment at Site 5, and for surface water (including groundwater discharged to surface water) and sediment in Blows Creek."

2. **Comment:** *Section 2.7.2 states that the removal action mitigated the potential unacceptable ecological risks associated with exposures to surface soils at Site 5 by removing contaminated soil within the ecological risk-based removal areas to a depth of 1 foot and replacing it with clean fill. Confirmation sampling was done in the excavations based on human health, but not for those based on ecological risk. Because ecological exposure occurs in the top 2 feet of soil, the Navy should clarify if contamination was localized to the top 1 foot or whether concentrations above cleanup goals exist in the 1 to 2 foot soil layer. If so, the removal may not be protective of ecological receptors. This issue should be clarified. This issue may apply to other sites remediated in the Blows Creek watershed.*

**Response:** As detailed within the EE/CA (CH2M HILL, 2007; AR number 000568), ecological cleanup goals were not developed because the site-wide average concentrations of ecological chemicals of potential concern remaining in place in surface soil and sediment

following implementation of the removal action reduced the potential risks to an acceptable level. The vertical extent of the ecological risk-based removal areas was 1 foot based on subsurface soil data collected during the RI which indicated there was no widespread COPC contamination in subsurface soil and any potential unacceptable ecological risks in soil would be primarily due to elevated COPC concentrations in samples within the waste boundary which would be addressed during the removal action. No changes to the document were made.

3. **Comment:** *BTAG retrieved the 2015 Site 5 Supplemental Remedial Investigation Report online and performed a preliminary review of the groundwater data and compared the results to the appropriate BTAG screening benchmarks. Exceedances were noted for arsenic, beryllium, cadmium, cobalt, iron, and lead. Other contaminants also exceeded the screening benchmarks but the maximum background concentrations were also greater than the screening values.*

**Response:** The Site 5 SRI (CH2M HILL, 2015; AR number 001452) was completed to address EPA concerns regarding potential hazards from exposure to cobalt in shallow aquifer groundwater if used as a potable water supply. There were no ecological concerns regarding groundwater at Site 5 since there is no exposure pathway within Site 5 for ecological receptors to come into contact with groundwater and the Blows Creek BERA concluded that groundwater discharge to surface water in Blows Creek does not pose an unacceptable risk. No changes to the document were made.